

## **Supported information.**

The instigator is described on the page 25-26 of the Application and Fig. 7. :

“The template (Fig.1) is formed on a substrate made from *e.g.*, glass, plastic, silicon or other material covered with spots (pixels or bio-array elements) of small chemically robust molecules (Fig.1, #1), *e.g.*, single stranded DNA, PNA, polypeptides or any other molecules that have a complimentary binding pair (*e.g.*, DNA-DNA pair or DNA-PNA pair, polypeptide-antibody, etc.). Between the spots, the surface may be covered with molecules that prevent nonspecific protein adsorption. The template can be made using standard techniques such as inkjet printing, photolithography, droplet techniques or others. For example, any DNA array can be used as a prototype for the template. Every single pixel of the array should be made using molecularly engineered techniques to enhance specific binding of the instigator.

The instigator (Fig. 2) (heterodimer) consists of two molecules. As discussed above, molecule #1 (Fig. 2) is a compliment to the molecule on the template surface (#1 on template and #1 instigator), another molecule #2 (Fig. 2) sets up the bio-array element for the protein screening or for the screening of small molecules – *e.g.*, candidates for drug discovery.

The instigator can be made using a variety of methods. #2 depends on proteomics application and can be, *e.g.*, an antibody, Fab fragments, a protein, or a drug candidate in high throughput drug screening.

The two molecules can be immobilized on beads, phospholipids vesicles or liposoms or the two molecules can be linked through avidin or strepavidin interaction with biotin attached to the molecules, through direct chemical binding, using PBA

(phenyl boronic acid) and SHA (salicylhydroxamic acid), the two antibodies can be linked through the protein A, etc.”

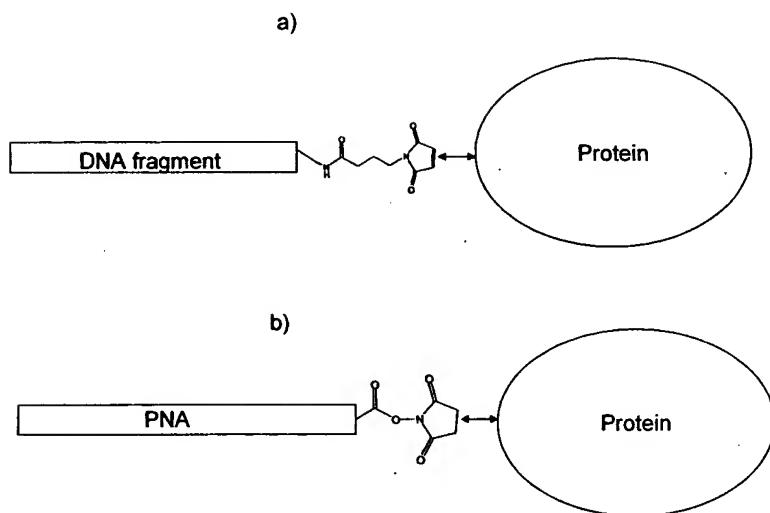


Fig.7. Example of the formation of the instigator.